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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,230	08/01/2001	Jerry L. Toms	2263/101	5306

7590

02/08/2006

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EXAMINER

HESS, DOUGLAS A

ART UNIT

PAPER NUMBER

3651

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/920,230

Applicant(s)

TOMS, JERRY L.

Examiner

Douglas A. Hess

Art Unit

3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8,9 and 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: USP 6,041,911 (2 sheets)  
USP 4,026,406 (1 sheet)

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: in line 1, it appears “seesentially” is a typo. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gebhart USP 6,041,911 in view of Gazzarini USP 4,026,406.

Gebhart USP 6,041,911 teaches the claimed invention as outlined on the marked up drawing figures 1-3, and the attached columns 3 and 4 of his specification. Gebhart fails to teach the staggered discharge areas of the plurality of channels. Gazzarini USP 4,026,406 teaches a feed chute having staggered discharge areas 16 as shown on the attached marked up drawing figure 1. Gebhart suggests in his column 4, that a further sorting arrangement may be arranged downstream of his particular invention which he does not show. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an extended staggered channel configuration on the device of Gebhart as taught by Gazzarini in order to provide a further means of sorting as Gazzarini does onto his conveyor 20.

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RE the projections of Gebhart, see the circled specification portion of column 4 for the discussion of having various different sorting arrangements for Gebhart projections 20.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. CLAIMS 8, 9, and 11-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

6. Applicant's arguments with respect to claims 1-7 and 10 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

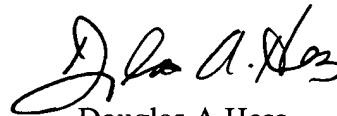
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas A. Hess whose telephone number is 571-272-6915. The examiner can normally be reached on M-Thurs 5:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Douglas A Hess  
Primary Examiner  
Art Unit 3651

2-7-06

DAH  
February 7, 2006

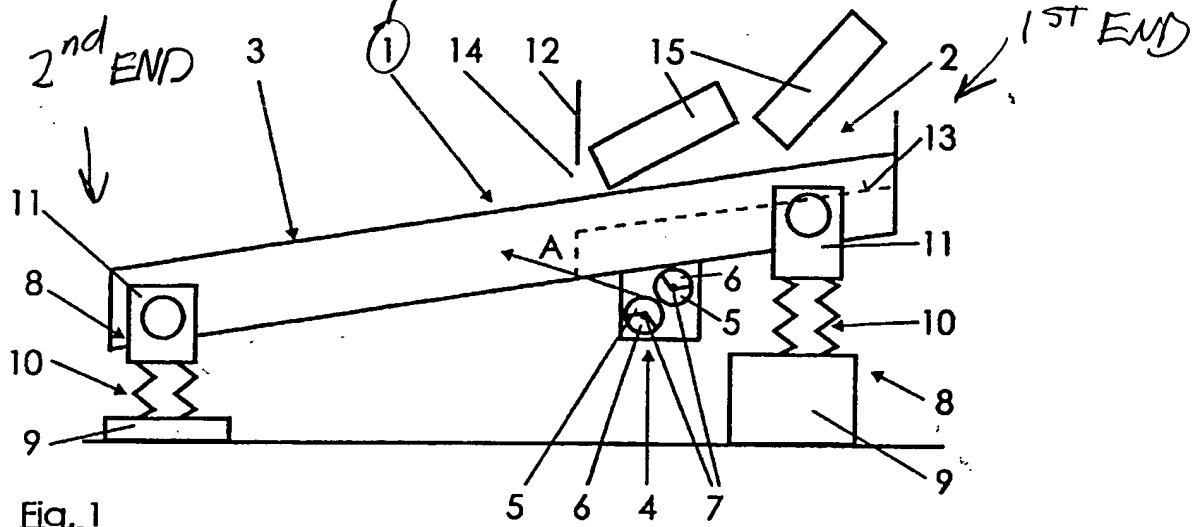


Fig. 1

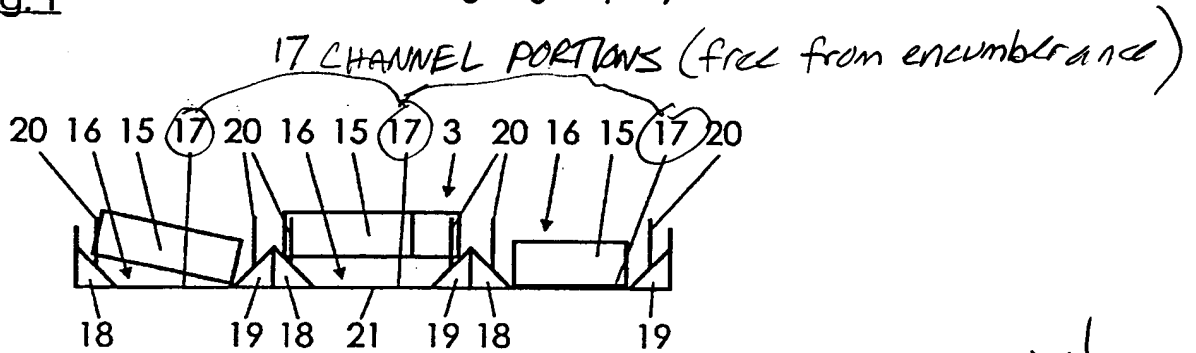


Fig. 2

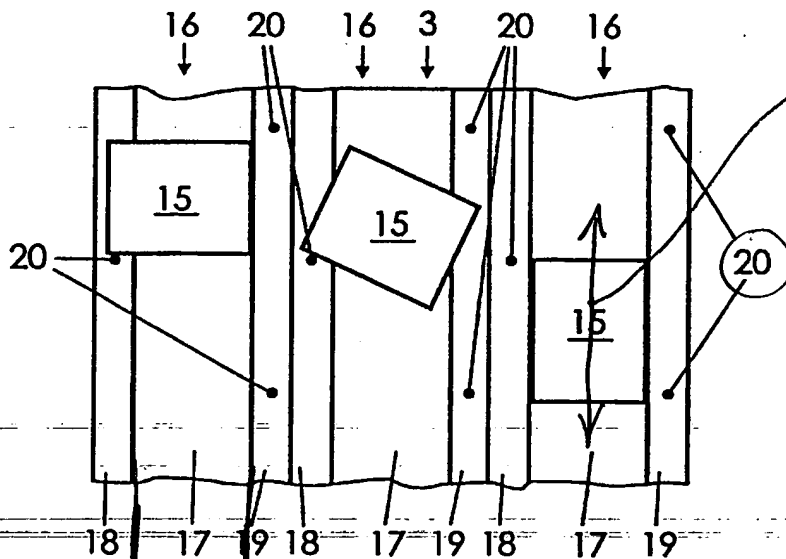


Fig. 3

CHANNEL PORTION @ bottom member

Longitudinal Axis of Article  
Aligning means  
spaced projections

balance element, each of which is arranged on a shaft, which has a horizontal axis, for producing directed vibration.

This produces vibrations, on the base of the sorting arrangement, which are aligned in the vertical direction and in the longitudinal direction of the collecting channels. In particular, the vibrations in the vertical direction raise the blocks slightly from the base again and again, this preventing jamming of the blocks even more effectively. The vibrations in the entry part cause the blocks to be overturned, with the result that, even before they have entered into the collecting channels, these blocks can only come to rest on their largest surface. The vibration produced in the case of two motors is directed to the center point of the sorting arrangement, this detaching the blocks from the base particularly well.

An exemplary embodiment of the invention is described in principle hereinbelow with reference to the drawing, in which:

FIG. 1 shows a side view of a sorting arrangement according to the invention;

FIG. 2 shows the front view of the sorting arrangement and

FIG. 3 shows the plan view of the sorting arrangement.

FIG. 1 illustrates a sorting arrangement 1 with an entry part 2 and a sorting part 3. Located on the underside of the sorting arrangement 1 is a vibration arrangement 4 which, in this case, has two motors 5 each with one unbalance element 6 arranged thereon. The unbalance elements 6 are each located on a shaft 7, which has a horizontal axis. The vibration arrangement 4 configures vibrations in the vertical direction and in the longitudinal direction of the sorting arrangement 1. The two motors 5 run in opposite directions here, as a result of which, depending on the positioning of the motors 5 and on the arrangement of the unbalance elements 6 on the motors 5, directed vibration is produced. As is illustrated by the arrow A, the vibration in this case is directed to the center of the sorting arrangement 1. If the arrow A is regarded as a vector, the directed vibration may also be referred to as vector vibration.

The sorting arrangement 1 is aligned obliquely with respect to the horizontal, there being arranged beneath the entry part 2 a damping arrangement 8 which comprises a base part 9, a spring device 10 and a fastening part 11, which connects the damping arrangement 8 to the sorting arrangement 1. Such a damping arrangement 8 is also arranged at the outlet of the sorting part 3. The damping arrangement 8 transmits to the sorting arrangement 1 as a whole vibrations produced by the vibration arrangement 4.

The strip 12 is fitted between the entry part 2 and the sorting part 3, and above the same, such that a through-passage 14 remains between the base 13 of the entry part 2 and the strip 12. The strip 12 prevents blocks 15 which are to be sorted from being able to pass into the sorting part 3, through the through-passage 14, from the entry part 2 in an upended state.

FIG. 2 shows a front view of the sorting arrangement 1, but the entry part 2 is not illustrated. The sorting part 3 has a plurality of collecting channels 16 which each have a central part 17 and lateral run-on surfaces 18, 19 arranged thereon. The width of the central part 17 corresponds at least approximately to one of the two shorter edge lengths of the block 15. In most cases, this is the width of the block 15, although the width of the central part 17 may also correspond to the height of the block 15.

Fitted on the run-on surfaces 18, 19 are stop elements which are designed as stop pins 20 and are aligned essen-

tially perpendicularly with respect to the base 21 of the sorting part 3. It is also possible for the stop elements to be designed as stop cones, but this is not illustrated.

If, as is illustrated in FIG. 2, a plurality of collecting channels 16 are arranged alongside one another, the adjacent run-on surfaces 18, 19 give a roof form. It is thus not possible for the blocks 15 to pass from one collecting channel 16 into an adjacent collecting channel 16. Of course, if required, there is also the possibility (not illustrated) of adjacent run-on surfaces giving a trapezoidal form. In this case, it would also be possible for the abovedescribed stop cones to be arranged on the resulting plateau of the trapezoidal form.

The plan view of the sorting part 3 of the sorting arrangement 1 which is illustrated in FIG. 3 shows three blocks 15, which are each located in a collecting channel 16. As soon as the blocks 15 have reached various positions within the collecting channel 16, it is possible to see how the sorting arrangement 1 functions as it sorts blocks 15.

In addition, the distances between the stop pins 20 are illustrated in FIG. 3. Thus, a stop pin 20 arranged on the run-on surface 18 is spaced apart from the next stop pin 20 in the conveying direction, which is arranged on the run-on surface 19, by a distance which corresponds at least to the width of the blocks 15 which are to be sorted. This prevents jamming of the blocks 15 in the collecting channel 16.

The lateral border of the central part 17 is spaced apart from the opposite stop pin 20 by a distance which is smaller than, or at most of equal size to, the length of the blocks 15. As a result, each block 15 which is not yet aligned in its longitudinal direction in the collecting channel 16, and is thus located in the central part 17, is forced against one of the stop pins 20 by way of its longer edge length or longitudinal side. Since that shorter side of the block 15 which is located opposite the stop pin 20 butts against the border of the central part 17, the block 15 turns around the stop pin 20 and, in doing so, slides downwards from the two run-on surfaces 18, 19. This turning movement continues until the block 15 is located entirely in the central part 17 and is thus aligned in the longitudinal direction.

After having run through the sorting arrangement 1, the block 15 can be stacked, packaged or palletized by appropriate means (not illustrated) in a known manner.

Of course, the sorting arrangement 1 may be adapted to various sizes of blocks 15, and even the position of the stop pins 20 on the run-on surfaces 18, 19 as well as the run-on surfaces 18, 19 themselves can be adapted to the various sizes of blocks 15 which are to be sorted. For this purpose, it is possible either for the sorting arrangement 1 to be converted or for a completely new sorting arrangement 1 to be set up.

Instead of the run-on surfaces 18, 19 being designed as sloping run-on surfaces 18, 19, it is also conceivable for said run-on surfaces 18, 19 to be of any other shape which causes the blocks 15 to perform a turning movement in order to pass into the central part 17, with the desired alignment.

A further sorting arrangement (not illustrated) may be arranged downstream of the sorting arrangement 1. This may be advantageous if there are no significant differences between the height, width and length of the blocks 15. This is because, in this case, it may not be possible, in some cases, for sorting to be carried out by the strip 12 in order to avoid upended blocks 15 from entering into the sorting part 3. If this is the case, the upended blocks 15 arriving at the end of the sorting part 3 may be correspondingly aligned subsequently by this further sorting arrangement (not illustrated).

Stop pins  
are arranged  
in any  
pattern

suggests  
a  
further  
downstream  
sorting

GAZZARINI

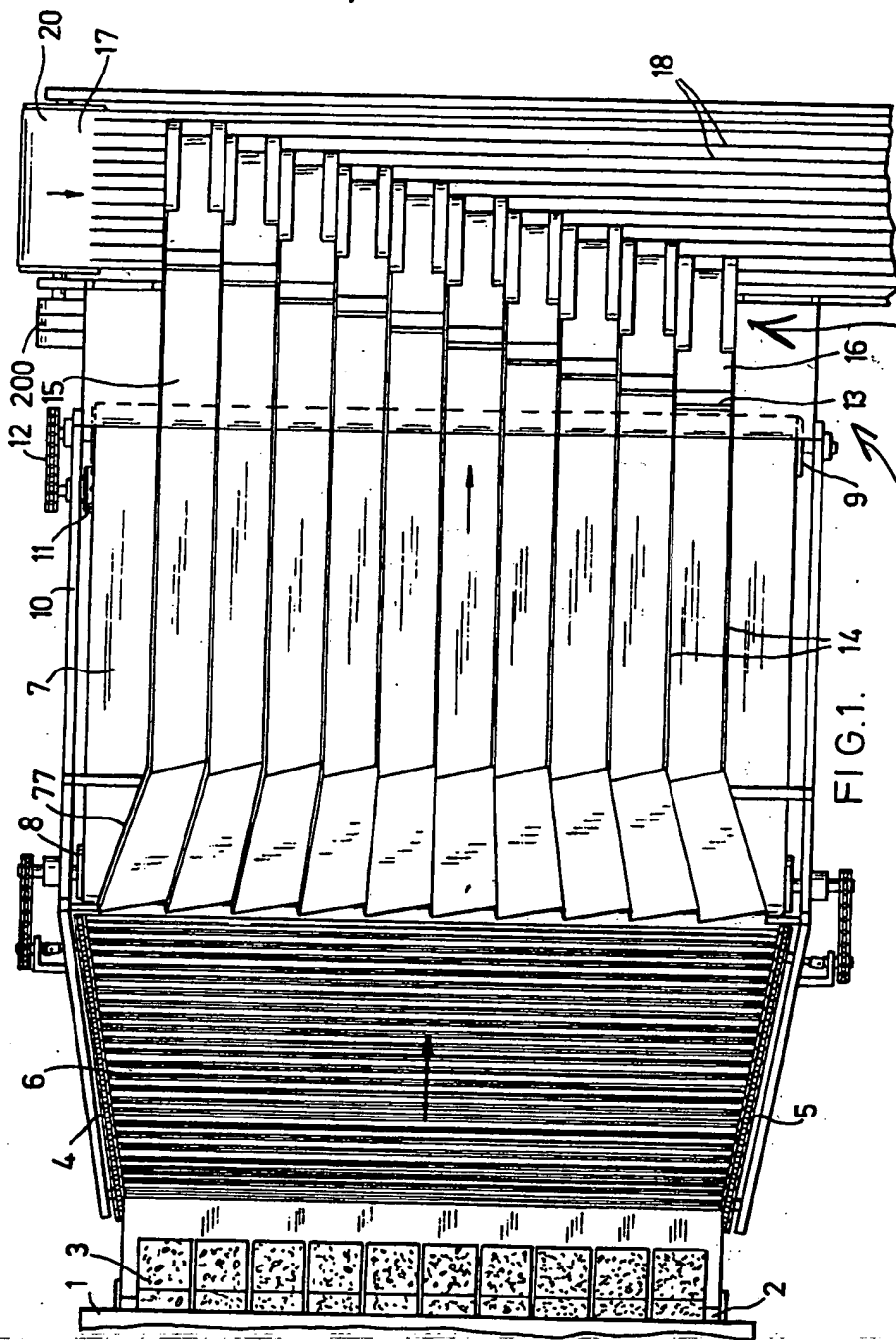


FIG. 1.

appear to be substantially the same distance (per claim 10)

Teaches the idea of staggering discharge